Issuance Date:
Effective Date: June 1, 2002
Expiration Date: June 1, 2007

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-7775

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

**City of Centralia**
**1401 West Mellen Street**
**Centralia, Washington 98531**

| | | |
|---|---|---|
| Plant Location: | Receiving Water: | |
| 1401 West Mellen Street<br>Centralia, Washington | Chehalis River<br>River Mile 66.8 | |
| Water Body I.D. No.: | Discharge Location:<br>INTERIM DISCHARGE: | Discharge Location:<br>FINAL DISCHARGE |
| WA-23-1020 | Latitude: 46° 42' 47" N<br>Longitude: 122° 58' 34" W | Latitude: 46° 45’ 41” N<br>Longitude: 123° 01’ 38” W |
| Plant Type: | FINAL LIMITS ARE APPLICABLE TO THE FINAL DISCHARGE LOCATION. | |
| Trickling Filter (currently)<br>Activated Sludge with Nitrification<br>Controls (at final discharge location) | | |

is authorized to discharge in accordance with the special and general conditions which follow.

Kelly Susewind, P.E.
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

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SUMMARY OF SCHEDULED PERMIT REPORT SUBMITTALS

| Permit Section | Submittal | Frequency | First Submittal Date |
|---|---|---|---|
| S3.A. | Discharge Monitoring Report | Monthly, no later than the 15th day of the month following the completed reporting period | |
| S4.B. | Plan for maintaining adequate capacity | as necessary | |
| S4.C. | Notification of new or altered sources | as necessary | |
| S4.D. | Annual Assessment of Flow and Waste Load | Annually | May 15, 2003 |
| S4.E. | I/I Reduction Plan | as required | May 15, 2003 |
| S5.B. | Updated Operation and Maintenance Manual | as necessary | |
| S5.D. | Notice of Short-term Reduction in Treatment Level | as necessary | |
| S6. | Report on Construction- or Maintenance-related Bypass | as necessary | |
| S8.B. | Discharge Authorization Required | as necessary | |
| S8.E. | Notice of Industrial User Violations | as necessary | |
| S8.F. | Industrial User Survey Update | Annually | January 1, 2003 |
| S9. | Priority Pollutant Scan and Metals Monitoring | Annually – Full Scan in Summer, Metals only in Winter. (See S9) | January 1, 2003 |
| S10. | Acute Toxicity Monitoring | After commencing discharge from the new treatment works | |
| S11. | Chronic Toxicity Monitoring | After commencing discharge from the new treatment works | |
| S12. | Mixing Zone Study | After design (model), and after operation (dye) of the new diffuser | As Described |
| S13. | Outfall Condition Report | Upon commencing operation and every two years thereafter | As Described |

| Permit Section | Submittal | Frequency | First Submittal Date |
|---|---|---|---|
| G17 | Application for permit renewal | 1/permit cycle | December 1, 2006 |

LEGAL NOTICE: In addition to the terms and conditions contained in this permit, the operation of the Wastewater Treatment Plant is subject to the provisions of the Consent Decree, entered on January 14, 2000 in the matter of Centralia, et al. V. EPA, et al., Civil Action No. C96-5968 RJB, United States District Court for the Western District of Washington at Tacoma. This Decree is required by court order to be attached to the Permit.

SPECIAL CONDITIONS

S1. EFFLUENT LIMITATIONS

A. Interim Effluent Limitations

Beginning on the effective date of this permit and lasting through the date for "Compliance with Final Effluent Limits" (Section S1.D.), the Permittee is authorized to discharge municipal wastewater at the permitted location in the Centralia Reach of the Chehalis River subject to the following limitations:

| **INTERIM EFFLUENT LIMITATIONS[a] (May - October)** | | |
|---|---|---|
| **Parameters** | **Monthly Average** | **Weekly Average** |
| $BOD_5$[b] | 35 mg/l, 550 lbs/day<br>85 percent removal | 52 mg/l, 825 lbs/day |
| TSS[c] | 35 mg/l, 584, lbs/day<br>80 percent removal | 52 mg/l, 875 lbs/day |
| Fecal Coliform Bacteria | 200/100 mL | 400/100 mL |
| PH | shall not be outside the range 6.0 to 9.0 | |
| **Parameters** | **Monthly Average** | **Daily Maximum** |
| Total Chlorine Residual | 0.015 mg/L | 0.031 mg/L |
| Ammonia ($NH_3$-N) | 282 lb/day | 400 lb/day |

| **INTERIM EFFLUENT LIMITATIONS[a] (November - April)** | | |
|---|---|---|
| **Parameters** | **Monthly Average** | **Weekly Average** |
| $BOD_5$[d] | 30 mg/l, 915 lbs/day<br>75 percent removal | 45 mg/l, 1,372 lbs/day |
| TSS[e] | 35 mg/l, 1,098 lbs/day<br>70 percent removal | 52 mg/l, 1,647 lbs/day |
| Fecal Coliform Bacteria | 200/100 mL | 400/100 mL |
| PH | shall not be outside the range 6.0 to 9.0 | |
| **Parameters** | **Monthly Average** | **Daily Maximum** |
| Total Chlorine Residual | 0.016 mg/L | 0.032 mg/L |
| Ammonia ($NH_3$-N) | 360 lbs/day | 700 lbs/day |

[a] The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

[b] The average monthly effluent concentration for $BOD_5$ shall not exceed 35 mg/L or 15 percent of the respective monthly average influent concentrations, whichever is more

stringent.

[c] The average monthly effluent concentration for Total Suspended Solids shall not exceed 35 mg/L or 20 percent of the respective monthly average influent concentrations, whichever is more stringent.

[d] The average monthly effluent concentration for $BOD_5$ shall not exceed 30 mg/L or 25 percent of the respective monthly average influent concentrations, whichever is more stringent.

[e] The average monthly effluent concentration for TSS shall not exceed 35 mg/L or 30 percent of the respective monthly average influent concentrations, whichever is more stringent.

B. Final Effluent Limitations During Dry Weather

In accordance with paragraph V.4.B of the attached Consent Decree, the Permittee's wastewater treatment plant shall discharge downstream of the Centralia Reach and below the mouth of the Skookumchuck River, no later than the date for "Compliance with Final Effluent Limits" (see Permit Condition S1.D.). At that approved location, (see cover page for grid coordinate) and lasting through the expiration date of the applicable permit, the Permittee is authorized to discharge municipal wastewater, subject to the following conditions and limitations:

1. Dry weather limits shall apply (except ammonia) on the next day after the 7-day moving average flow in the Centralia Reach of the Chehalis River goes below 1,000 cfs and on all subsequent days until the wet weather limits apply.
2. The flow in the Centralia Reach shall be determined by the USGS Grand Mound gage (12-027500) using the equation y = 0.7396 x - 28.28 ("y" is the calculated flow (cfs) in the Centralia Reach; "x" is the recorded flow (cfs) as measured at the Grand Mound gage; cfs means cubic feet per second).
3. A gaging station installed in or near the Centralia Reach may be used as the definitive measure of flows in the Centralia Reach in lieu of flows calculated in Item 2.
4. When daily flows in the Centralia Reach are less than 200 cfs, more stringent effluent limits shall apply, as noted in the following table. A direct measurement from the Grand Mound gage at 300 cfs shall be deemed equivalent to the 200 cfs level in the Centralia Reach.
5. Dry weather limits for ammonia shall go into effect 14 days after the seven-day moving average flow in the Centralia Reach is less than 1,000 cfs. The 14-day phase-in period shall be triggered no earlier than March 1 of each year (March 15th is the earliest date that dry weather limits would apply).

| **FINAL EFFLUENT LIMITATIONS[a] (Dry Weather)** | | |
|---|---|---|
| **Parameters** | **Monthly Average** | **Daily Maximum** |
| $BOD_5$[b]<br>(Flows < 200 cfs)<br>(Flows > 200 cfs) | <br>20 mg/l, 583 lbs/day<br>20 mg/l, 650 lbs/day<br>85 percent removal | <br>30 mg/l, 826 lbs/day<br>30 mg/l, 926 lbs/day |
| TSS[b] | | |

| FINAL EFFLUENT LIMITATIONS[a] (Dry Weather) | | |
|---|---|---|
| **Parameters** | **Monthly Average** | **Daily Maximum** |
| (Flows < 200 cfs)<br>(Flows > 200 cfs) | 20 mg/l, 583 lbs/day<br>20 mg/l, 630 lbs/day<br>85 percent removal | 30 mg/l, 826 lbs/day<br>30 mg/l, 926 lbs/day |
| Effluent Flow Rate<br>(Flows < 200 cfs)<br>(Flows > 200 cfs) | | <br>3.3 mgd<br>3.7 mgd |
| Fecal Coliform Bacteria | 200/100 mL | 400/100 mL |
| PH | shall not be outside the range 6.0 to 9.0 | |
| | **March 15 through November 30** | |
| **Parameter** | **Monthly Average** | **Daily Maximum** |
| Ammonia ($NH_3$-N) (Flows < 200 cfs) | 3.44 mg/L | 4.0 mg/L, 110 lbs/day |
| Ammonia ($NH_3$-N) (Flows > 200 cfs) | 3.44 mg/L | 4.0 mg/L, 123 lbs/day |
| | **December through March 14** | |
| **Parameter** | **Daily Maximum** | |
| Ammonia ($NH_3$-N) | 15 mg/L, 463 lbs/day | |

[a] The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

[b] The average monthly effluent concentration for $BOD_5$ and Total Suspended Solids shall not exceed 20 mg/L or 15 percent of the respective monthly average influent concentrations, whichever is more stringent.

C. Final Effluent Limitations During Wet Weather

Beginning on the date for "Compliance with Final Effluent Limit" (see Permit Special Condition S1.D), and lasting through the expiration date of the applicable permit, the Permittee will be authorized to discharge municipal wastewater to the Centralia Reach of the Chehalis River, subject to the following conditions and limitations:

1. Wet weather limits shall apply on the next day after the seven-day moving average flow in the Centralia Reach of the Chehalis River is greater than 1,000 cfs and the daily flow of the Centralia Reach has been greater than 2,500 cfs during at least one day of the preceding seven days.

2. The flow in the Centralia Reach shall be determined by the USGS Grand Mound gage (12-027500) using the equation y = 0.7396 x - 28.28 (y is the calculated flow (cfs) in the Centralia Reach; x is the recorded flow (cfs) as measured at the Grand Mound gage).

| FINAL EFFLUENT LIMITATIONS[a] (Wet Weather) | | | |
|---|---|---|---|
| **Parameters** | **Monthly Average** | **Weekly Average** | **Daily Maximum** |

| | | | |
|---|---|---|---|
| $BOD_5$[b] | 30 mg/l, 1,100 lbs/day and 75 percent removal | 1,650 lbs/day | 45 mg/l and 2,530 lbs/day |
| TSS[b] | 30 mg/l, 1,260 lbs/day and 70 percent removal | 1,890 lbs/day | 45 mg/l and 2,530 lbs/day |
| Ammonia (NH3-N) | 14.6 mg/L | n/a | 15 mg/L and 657 lbs/day |
| Fecal Coliform Bacteria | 200/100 mL | | 400/100 mL |
| pH | shall not be outside the range 6.0 to 9.0 | | |

[a] The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

[b] The average monthly effluent concentration for $BOD_5$ and Total Suspended Solids shall not exceed 30 mg/L. The percent removal and mass loading (lbs/day) requirements for $BOD_5$ and Total Suspended Solids shall be delayed until after twenty-four months of discharge monitoring reports (DMRs) for the new facility are submitted to the Department. The date will be used by the Department to determine the actual percent removal achieved by the WWTP [see WAC 173-221-030(11)]. If the Permittee demonstrates that an alternative effluent limit is warranted [WAC 173-221-050(4) and (5)] then the results of the DMR data analysis may be used to revise the permit limits to reflect changes to the percent removal and mass loading limits.

D. Schedule For Meeting Final Effluent Limits

The Department has determined meeting the final effluent limits requires the Permittee to plan, design and construct additional treatment capability. A schedule is therefore granted to ensure final compliance with the Water Quality-based effluent limits in the shortest practicable time. To accomplish this construction, the Permittee submitted a request for funding, which also included a schedule for completion of construction activities. This schedule achieves full compliance with final effluent limitations of paragraph V.4.C.(iv) of Consent Decree No. C96-5968 RJB within the time frames established by the Consent Decree and is accepted. To maintain this schedule, the Department provided the Permittee a funding offer for $26,998,953.00 on August 31, 2000. This permit incorporates the proposed schedule:

Compliance Schedule for Construction of New Treatment Facilities

| MILESTONE: | MILESTONE DATE: |
|---|---|
| Report on Percentage Construction Completed to Date and estimated completion date of funded activities | June 1, 2003, and annually thereafter on this date until submitting a Certification of completion of construction |
| Achieve Compliance with Final Limits | January 18, 2008 |

The Permittee shall accomplish the above schedule. For each Milestone, the Permittee shall submit a report to the Department within 30 days following the Milestone Date that confirms that compliance with that milestone has been achieved. If the milestone has not

been achieved, the report shall identify the reasons that the milestone date was not met, the estimated date when the milestone will be met, and the impact, if any, on later milestones.

E. Effluent Mixing Zones

The maximum boundaries of the mixing zones are defined as follows:

Chronic mixing zone -- The maximum size of the mixing zone shall comply with the most restrictive combination of the following: 1) not extend in a downstream direction for a distance from the discharge port(s) greater than three hundred feet plus the depth of water over the discharge port(s), or extend upstream for a distance of over 100 feet; 2) not utilize greater than 25 percent of the flow; 3) not occupy greater than 25 percent of the width of the water body.

Acute mixing zone -- The maximum size of the mixing zone shall comply with the most restrictive combination of the following: 1) not extend beyond ten percent of the distance towards the upstream and downstream boundaries of an authorized mixing zone, as measured independently from the discharge port(s); 2) not occupy greater than two and one-half percent of the flow; 3) not occupy greater than two and one-half percent of the width of the water body.

S2. TESTING SCHEDULE

The Permittees shall monitor the wastewater and sludge according to the following schedules:

| Tests | Sample Point | Sampling Frequency | Sample Type |
|---|---|---|---|
| Flow, mgd | Influent or Final Effluent | Continuous | On-Line |
| Temperature | Influent;<br>Final Effluent | Twice daily in early morning and late afternoon | Grab<br>Grab or continuous[e] |
| pH | Influent;<br>Final Effluent | Daily;<br>Daily | Grab<br>Grab |
| $BOD_5$[a] | Influent;<br>Final Effluent | 3/week;<br>3/week | 24-hr. Composite<br>24-hr. Composite |
| TSS | Influent;<br>Final Effluent | 3/week;<br>3/week | 24-hr. Composite<br>24-hr. Composite |
| Chlorine Residual | Final Effluent | Daily[f] | Grab |
| Fecal Coliform[b] | Final Effluent | 3/week | Grab |
| Ammonia-Nitrogen | Final Effluent | 3/week | Grab |
| Dissolved Oxygen | Final Effluent | Daily | Grab |
| ADDITIONAL MONITORING | | | |
| Chehalis River | Within 500' upstream of the outfall in the main | Early morning and late afternoon on | Field reading or |

| Tests | Sample Point | Sampling Frequency | Sample Type |
|---|---|---|---|
| Temperature | channel, 18" to 36" below the surface. | three days per week between June 1st and September 1st if river flow is < 1,000 cfs | continuous[e] |
| Chehalis River flows[c] | Centralia Reach | 7-day running average | Recording |
| Chehalis River flows[d] | Centralia Reach | Flows < > 200 cfs | Recording |

[a] Samples for BOD5 analysis may be taken before or after the disinfection process. If taken after, the sample must be dechlorinated and reseeded.
[b.] Sample concurrently with Total Residual Chlorine
[c] The 7-day running average shall be recorded for the Centralia Reach of the Chehalis (see the second paragraph of Condition S1.B and S1.C, above). The Permittee shall FLAG the date that the effluent limitations change to either the Dry Weather (S1.B.) or Wet Weather (S1.C.) conditions, and shall submit the appropriate Dry Weather or Wet Weather Discharge Monitoring Report.
[d] The Permittee shall FLAG the date that the mass discharges for BOD5, TSS, and ammonia change on the appropriate Discharge Monitoring Report.
[e] If continuous data logging probes are used, two probes shall be used to ensure integrity of the data, and the minimum, average, and maximum temperatures for all days for which data has been collected shall be reported.
[f] After final limits apply, the Permittee shall either monitor chlorine (in which case the results must be reported) or reference a footnote on their Discharge Monitoring Report that no chlorine compounds were applied to return activated solids or the secondary clarifiers and no chlorine monitoring was performed in accordance with 40 CFR 136 methods.

S3. MONITORING AND REPORTING

The Permittee shall monitor and report in accordance with the following conditions.

A. Reporting

Monitoring results obtained during the previous month shall be summarized and reported on a form provided, or otherwise approved, by the Department, to be submitted no later than the 15th day of the month following the completed reporting period. The report shall be sent to the Department of Ecology, Southwest Regional Office, P.O. Box 47775, Olympia, Washington 98504-7775. Monitoring shall be started on the effective date of the permit and the first report is due on the 15th day of the following month.

B. Records Retention

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years. The Permittee shall retain for a minimum of five years all records pertaining to the monitoring of sludge. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the

Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Representative Sampling

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets and maintenance-related conditions affecting effluent quality.

E. Test Procedures

All sampling and analytical methods used to meet the wastewater monitoring requirements specified in this permit shall conform to the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136, unless otherwise specified in this permit or approved in writing by the Department.

Sludge monitoring requirements specified in this permit shall be conducted according to test procedures specified in 40 CFR Part 503.

F. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations or at a minimum frequency of at least one calibration per year. Calibration records shall be retained for at least three years.

G. Laboratory Accreditation

All monitoring data, except for flow, temperature, settleable solids, conductivity, pH, and internal process control parameters, shall be prepared by a laboratory registered or accredited under the provisions of, Accreditation of Environmental Laboratories, Chapter 173-50 WAC. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Soils and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by the Department.

H. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit (S2.) using test procedures specified by Condition S3.E of this permit, then the results of this monitoring shall be included in the Permittee's self-monitoring reports.

I. Signatory Requirements

All applications, reports, or information submitted to the Department shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

2. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Department, and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph I.2.b is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of I.2.b must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

   "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for willful violations."

S4. PREVENTION OF FACILITY OVERLOADING

A. Flows and waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded:

1. Existing Design Criteria

Flows or waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded.

Average flow for the maximum wet month: ..... 4.30 MGD
Average flow for the maximum dry month: ..... 2.00 MGD
Influent $BOD_5$ loading for maximum month: ..... 3,660 lbs/day
Influent TSS loading for maximum month: ..... 3,660 lbs/day

2. Design Criteria for facility required by S1.D (Phase 1)

Average annual flow: ..... 3.4 MGD
Average flow for the maximum month: ..... 5.3 MGD
Peak daily flow ..... 9.23 MGD
Influent $BOD_5$ loading for maximum month: ..... 4,400 lbs/day
Influent TSS loading for maximum month: ..... 4,200 lbs/day

3. Limits on Flow of Consent Decree C96-5968 RJB Incorporated by Order:

Maximum daily flow when river flows are below 200 cfs: .....3.3 MGD
Maximum daily flow when river flows are below 1000 cfs ....3.7 MGD
Maximum daily flow when river flows are above 1000 cfs ....10.5 MGD
Influent $BOD_5$ loading for maximum month: .....8,700 lbs/day
Influent TSS loading for maximum month: .....8,500 lbs/day

B. Plans for Maintaining Adequate Capacity

When the actual flow or wasteload reaches 85 percent of any one of the design criteria for the Phase 1 facility in S4.A.2 for three consecutive months, or when the projected increases would reach design capacity within five years, whichever occurs first, the Permittee shall submit to the Department, a plan and a schedule for continuing to maintain capacity at the facility sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet this objective.

1. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above.
2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
3. Limitation on future sewer extensions or connections or additional wasteloads.

4. Modification or expansion of facilities necessary to accommodate increased flow or wasteload.

5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or wasteload.

The plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by the Department prior to any construction. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. Notification of New or Altered Sources

The Permittee shall submit written notice to the Department whenever any new discharge or increase in volume or change in character of an existing discharge into the sewer is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the collection or treatment system; (2) would increase the total system flow or influent waste loading by more than 10 percent; (3) is not part of an approved general sewer plan or approved plans and specifications; or would be subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act. This notice shall include an evaluation of the system's ability to adequately transport and treat the added flow and/or wasteload.

D. Annual Assessment

The Permittee shall conduct an annual assessment of their flow and waste load and submit a report to the Department by May 15, 2002, and annually thereafter. The report shall contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, BOD, and total suspended solids loadings; and the percentage increase in these parameters since the last annual report. The report shall also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above.

E. Infiltration and Inflow (I/I) Reduction Program

As an ongoing maintenance requirement, and to provide information needed for the determination of whether the facility can cost effectively remove additional I/I, the Permittee shall develop and implement a program for ongoing wastewater facility maintenance, repair, and replacement, including I/I control [see WAC 173-221-050(4)(b)(iv)]. The Permittee has committed to a schedule of I/I work in Agreed Order # DE 02WQSR-3551 with the Department. The Permittee's adherence to that schedule forms the basis for the deviation from 85 percent removal requirement for BOD and TSS in the wet weather season in section S1.C. The 85 percent removal requirement shall be reinstituted in the wet season if the Permittee fails to accomplish these commitments or notifies the Department in writing of its finding that further commitments listed in this agreed order are not necessary to meeting the 85 percent removal requirement. The Permittee shall annually report by May 15 of each year whether the projects identified in that agreed Order have been accomplished and the following information:

1. I/I Flow Evaluation – Include: (1) The difference in inflow rates and infiltration rates versus the previous two years and the base year versus federal peak day inflow standards of 275 gallons per capita per day (g/c/d) and wet season (non-

storm) infiltration standard of 175 g/c/d; (2) The frequency and estimated volume of all raw wastewater bypasses and overflows

2. Collection System Monitoring and Maintenance Plan – Including: (1) Plans for monitoring I/I within the collection system, (2) A maintenance schedule including maintenance related I/I reduction projects for the previous year and the coming year and; (3) Resources committed to ongoing I/I maintenance program.

3. I/I Reduction Program – The program shall contain: (1) Description and prioritization of currently identified I/I project needs; (2) Schedule for completion of identified I/I projects; and (3) Funding commitments and sewer rates needed for construction of I/I projects. NOTE: The Permittee may defer accomplishing projects for correcting I/I as allowed by paragraph V.5.C.(iii) of Consent Decree No. C96-5968 RJB. This schedule should reflect the City's plans in consideration of this allowance.

The deferral of activities for correction of I/I shall not apply to routine maintenance and the reduction and eventual elimination of raw wastewater overflows in the collection system. The Permittee shall immediately notify the Department of any raw sewage overflows and bypasses. Raw wastewater overflows are considered noncompliance with this permit (see General Condition G4) and therefore their elimination cannot be deferred. All discharges to waters of the state must receive, at a minimum, "all known, available and reasonable treatment (AKART)." See 40 CFR Part 122.41, RCW 90.48.080, WAC 173-201A-060(6), WAC 173-220-130, and WAC 173-221-040.

S5. OPERATION AND MAINTENANCE OF MUNICIPAL FACILITIES

A. Certified Operator

In accordance with Chapter 173-230 WAC, the Permittee shall provide an adequate operating staff which is qualified to carry out the operation, maintenance, and testing activities required to ensure compliance with the conditions of this permit. Trickling filters are considered Biofiltration, and according to WAC 173-240-140 as amended 12/1/99, the present and proposed new facilities are both class III plants. An operator certified for at least a Class III plant by the state of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. A Class II operator, or higher, shall be present at the facility during all shifts when operational changes are made to the treatment process.

B. O & M Manual

The approved operation and maintenance manual shall be kept available at the treatment plant. The operation and maintenance manual shall contain the plant process control monitoring schedule. All operators are responsible for being familiar with, and using, this manual. The operation and maintenance manual shall be updated as needed. Updated portions of the operations and maintenance manual shall be submitted to the Department for review and approval.

C. O & M Program

The Permittee shall maintain an adequate operation and maintenance program for their entire sewage system. Maintenance records shall be maintained on all major electrical

and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

D. Short-Term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause an exceedance of permit effluent limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to the Department, if possible, 30 days prior to such activities, detailing the reasons for, length of time of and the potential effects of the reduced level of treatment.

E. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes. The Permittee shall maintain Reliability Class II at the present wastewater treatment plant, which requires primary sedimentation and disinfection. The Permittee shall maintain a reliability class for the new facility as specified in the approved facilities plans for that facility.

F. Prevent Connection of Inflow

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

S6. CONSTRUCTION OR MAINTENANCE-RELATED OVERFLOW OR BYPASS

Bypass of untreated or partially treated sewage during construction or maintenance shall be avoided if at all feasible.

If construction or maintenance-related overflow or bypass is contemplated, the Permittee shall submit to the Department, not less than 90 days prior to the contemplated overflow or bypass, a report which describes in detail any construction work which will result in overflow or bypass of wastewater. The report shall contain: (1) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (2) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (3) the minimum and maximum duration of bypass under each alternative; (4) a recommendation as to the preferred alternative for conducting the bypass; (5) the project date of bypass initiation; (6) a statement of compliance with SEPA; and (7) a request for a water quality modification, as provided for in WAC 173-201A-110.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued

analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

Final authorization to bypass may be granted after review of the above information, in accordance with General Condition G5. Authorization to bypass will be by administrative order.

S7. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge, and other solid waste. The Permittee shall store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

S8. PRETREATMENT

A. General Requirements

The Permittee shall work cooperatively with the Department to ensure that all commercial and industrial users of the wastewater treatment system are in compliance with the pretreatment regulations promulgated in 40 CFR Part 403 and any additional pretreatment regulations that may be promulgated under Section 307(b) and reporting requirements under Section 308 of the Federal Clean Water Act.

B. Discharge Authorization Required

Significant commercial or industrial operations shall not be allowed to discharge wastes to the Permittee's sewerage system until they have received prior authorization from the Department in accordance with Chapter 90.48 RCW and Chapter 173-216 WAC, as amended. The Permittee shall immediately notify the Department of any proposed new sources, as defined in 40 CFR 403.3(k), from significant commercial or industrial operations.

C. General Prohibitions

To maintain compliance with Federal Pretreatment regulations at 40 CFR 403.5(a), the Permittee shall not permit a nondomestic discharger to introduce into the Permittee's sewerage system any pollutant(s) that cause pass through or interference.

D. Specific Prohibitions

In accordance with 40 CFR 403.5(b), the Permittee shall not allow the following non-domestic discharges to be discharged into the Permittee's sewerage treatment system:

1. Pollutants that crease a fire or explosion hazard in the POTW (including, but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21).

2. Pollutants that will cause corrosive structural damage to the Publicly Owned Treatment Works (POTW), but in no case discharges with pH lower than 5.0

standard units, unless the works are specifically designed to accommodate such discharges.

3. Solid or viscous pollutants in amounts that could cause obstruction to the flow in sewers or otherwise interfere with the operation of the POTW.

4. Any pollutant, including oxygen demanding pollutants, (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.

5. Heat in amounts that will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities such that the temperature at the POTW exceeds 40°C (104°F) unless the Department, upon request of the Permittee, approves, in writing, alternate temperature limits.

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity which may cause acute worker health and safety problems.

8. Any trucked or hauled pollutants, except at discharge points designated by the Permittee, and for non-domestic wastewater, as authorized by the Department.

E. Notification of Industrial User Violations

The Permittee shall notify the Department upon discovery that any nondomestic user violates the prohibitions listed in S8.C and S8.D above.

F. Pretreatment Support Tasks

In addition to immediate notification of new significant industrial users, the Permittee will, by January 1, 2003, survey all non-domestic dischargers in accordance with Department guidance for such surveys. If any non-domestic dischargers are discovered through such survey efforts, the Department notification shall include the completed survey form from that User. The Permittee shall provide an annual survey update to the Department by January 1 of each year and with the permit application required by Section G17.

Upon notification by the Department or upon finding that any pollutant has caused pass through or interference, the Permittee shall develop appropriate local limits in accordance with Department guidance, including such sampling as may be required from which to technically base such limits.

In the event that the Department has determined that local limits are necessary, the Permittee shall, upon being notified of appropriate limits, take all measures required to codify these or any more stringent limits, along with other appropriate language within six months of the date of establishment of the limits.

S9. PRIORITY POLLUTANT SCANS

A. Testing and Reporting Requirements

The Permittee shall conduct an annual priority pollutant scan analysis of the influent, effluent, and sludge samples collected from the wastewater treatment system in accordance with protocols, monitoring requirements, and QA/QC procedures specified in this section. These samples shall be taken during the critical season, with one metals monitoring required annually during the high flow period.

The results of this analyses shall be submitted in a tabular report to the Department annually within 30 days of the Permittee's receipt of the results of the final analysis of the year, but not later than January 1 of the following calendar year. The tabular report shall use the pollutant names listed in 40 CFR 122 appendix D, and include in parenthesis any synonyms used in the laboratory report. The contracted laboratory's report shall be included with the tabular results of sampling.

B. Monitoring Requirements

1. During the first summer after commencement of operation at the new wastewater facility, but not later than October 1, 2006, the Permittee shall conduct one annual analysis for priority pollutants in the influent, effluent, and sludge. Influent and effluent Priority Pollutant samples shall be 24-hour composite samples analyzed for all pollutants listed in 40 CFR part 122, Appendix D, Table II (organics) and Table III (metals and cyanide). Other toxic pollutants listed in 40 CFR part 122, Appendix D, Table IV and V shall be monitored for if expected present.

2. The Permittee shall conduct two annual analysis for only the pollutants listed in 40 CFR part 122, Appendix D, Table III (metals and cyanide) from samples of the influent, effluent and sludge. These samples shall be taken between June 1, and August 30$^{th}$ (for a dry weather sample) and December 1, and February 28, of each year (for a wet weather sample).

3. Influent sampling shall commence first, with effluent sample collection delayed by roughly the hydraulic detention time of the POTW on the day of sampling.

4. Sludge samples shall be representative laboratory composited samples analyzed for the same analytes as influent and effluent samples. Each sample set of the sludge shall be composited from at least three individually obtained samples as per 40 CFR 503.16 or "POTW Sludge Sampling and Analysis Guidance Document, EPA, 1993 and updates.

C. Protocols

Effluent and sludge monitoring of this section will not be used to evaluate compliance with any numerical limits of this permit. Therefore protocols are not limited to those methods specified in 40 CFR Part 136 and 40 CFR Part 503, respectively. The Permittee may use any more sensitive EPA or Standard Methods analytical method for a particular chemical analysis that will measure a suite of chemicals. For metals, the Permittee shall use a method at least as sensitive as EPA method 200.8, ICP-MS.

D. Quality Assurance/Quality Control Procedures

The Permittee shall follow the quality assurance procedures of 40 CFR Part 136 for the effluent and EPA publication titled "Test Methods for Analysis of Solid Waste, 1986 (and updates) for the sludge."

## S10. ACUTE TOXICITY

A. Effluent Characterization

The Permittee shall commence WET testing upon commencement of discharge from the facilities described in the January 2000 Facilities Plan. The sampling regime is detailed below. This permit is anticipated expiring prior to that event. Therefore, this permit has no specific date upon which the WET sample results are due. In the eventuality this permit is extended or the Permittee otherwise completes construction of its new facility prior to the anticipated date, this requirement to conduct WET monitoring as detailed in this section shall apply.The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The three acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted quarterly for one year with two tests occurring in the period when dry weather limits apply, and two tests during the period when wet weather limits apply. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50 percent of the organisms ($LC_{50}$). The percent survival in 100 percent effluent shall also be reported.

Testing shall begin within 60 days of the commencement of discharge from the new treatment works required by the compliance schedule within this permit. A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Acute toxicity tests shall be conducted with the following species and protocols:

1. Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA/600/4-90/027F).

2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA/600/4-90/027F). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

3. Rainbow trout, *Oncorhynchus mykiss* (96 hour static-renewal test, method: EPA/600/4-90/027F).

B. Effluent Limit for Acute Toxicity

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100 percent effluent is below 80 percent, or

2. Any one test of any species exhibits less than 65 percent survival in 100 percent effluent.

If an effluent limit for acute toxicity is required by subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in subsections C, D, and F.

If no effluent limit is required by subsection B at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in subsections E and F.

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC). The ACEC shall be specific to whether the sample is taken during the period when wet weather or dry weather limits apply.

In the event of failure to pass the test described in subsection C of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100. The zone of acute criteria exceedance for the new permit outfall has been estimated in the January 2000 Facility Plan and the accompanying Fact Sheet. The ACEC equals 62.5 percent effluent for the period when dry weather limits apply and 36 percent effluent for the period of time when wet weather limits apply.

C. Monitoring for Compliance with an Effluent Limit for Acute Toxicity

If the Permittee is found to have a limit for Acute Toxicity under section B, compliance with the effluent limit shall be determined by conducting quarterly sampling for the remainder of the permit term using each of the species listed in subsection A on a rotating basis and performed using at a minimum 100 percent effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100 percent effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level

of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than ten percent, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance with an Effluent Limit for Acute Toxicity

If the Permittee violates the acute toxicity limit in subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the $LC_{50}$ and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department-within 60 days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity

If this permit is renewed or extended so that the terms and conditions of this permit apply until the year 2010 or later, the Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial acute effluent characterization or substitutes approved by the

Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

6. Since chlorine will not be used in the approved facility, the whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the acute statistical power standard of 29 percent as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

## S11. CHRONIC TOXICITY

A. Effluent Characterization

The Permittee shall commence WET testing upon commencement of discharge from the facilities described in the approved January 2000 Facilities Plan. The sampling regime is detailed below. This permit is anticipated to expire prior to that event. Therefore this permit has no specific date upon which the WET sample results are due. If, however, this permit is extended or the Permittee otherwise completes construction of its new facility prior to the anticipated date, this requirement to conduct WET monitoring as detailed in this section shall apply.

The Permittee shall conduct chronic toxicity testing on the final effluent. The three chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Testing shall begin within 60 days after commencement of discharge from the facilities to be constructed in accordance with the compliance schedule in this permit. A written report shall be submitted to the Department within 60 days after each sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability, which is developed during the period of testing.

Effluent testing for chronic toxicity shall be conducted quarterly for one year. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following two species and the most recent version of the following protocols:

| **Freshwater Chronic Toxicity Test Species** | | **Method** |
|---|---|---|
| Fathead minnow | *Pimephales promelas* | EPA/600/4-91/002 |
| Water flea | *Ceriodaphnia dubia* | EPA/600/4-91/002 |

B. Effluent Limit for Chronic Toxicity

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001) and shall complete all applicable requirements in subsections C, D, and F.

If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only subsections E and F apply.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).

In the event of failure to pass the test described in subsection C, of this section, for compliance with the effluent limit for chronic toxicity, the Permittee is considered to be in compliance with all permit requirements for chronic whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department.

The CCEC means the maximum concentration of effluent allowable at the boundary of the mixing zone. The zone of acute criteria exceedance for the new permit outfall has been estimated in the January 2000 Facility Plan and the accompanying Fact Sheet. The CCEC equals 15 percent effluent for the period when dry weather limits apply and five percent effluent for the period of time when wet weather limits apply.

C. Monitoring for Compliance with an Effluent Limit for Chronic Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted semi-annually for the remainder of the permit term using each of the species listed in subsection A on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20 percent, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance with an Effluent Limit for Chronic Toxicity

If a toxicity test conducted for compliance monitoring under subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control

in order to determine compliance with the effluent limit for chronic toxicity as described in subsection C. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department-within 60 days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Chronic Toxicity

If this permit is renewed or extended so that the terms and conditions of this permit apply until the year 2010 or later, the Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the chronic statistical power standard of 39 percent as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

## S12. EFFLUENT MIXING STUDY

The exact location of the outfall has not been determined as of the writing of this permit. Therefore appropriate effluent mixing cannot be predicted with reliability. Permit limits listed as

"final limits" estimate limits based on achieving the maximum authorized mixing by the time the effluent plume reaches the edge of the acute and chronic mixing zone boundaries. The Permittee must therefore prepare a study using scientific models approved by the Department of Ecology for confirming whether this presumption can be met after the exact outfall location is selected and the outfall structure is designed. This study shall be submitted by January 1, 2005.

A. General Requirements

The Permittee shall determine the degree of effluent and receiving water mixing which occurs within the mixing zone (as defined in permit condition S1.B). The degree of mixing shall be determined during critical conditions, as defined in WAC 173-201A-020 Definitions-"Critical Condition," or as close to critical conditions as reasonably possible.

The critical condition scenarios shall be established in accordance with *Guidance for Conducting Mixing Zone Analyses* (Ecology, 1996). The Permittee shall use a mixing model and shall obtain the critical ambient conditions necessary for model input by research and/or field studies. The *Guidance* mentioned above shall be consulted when choosing the appropriate model.

Within one year after commencement of operation of the outfall or one year after "final limits" are effective – whichever is later, the Permittee shall measure the dilution ratio with dye. Within six months after the dye testing, the Permittee shall submit the acute and chronic mixing zone ratios indicated by dye study results. The Permittee shall use the study protocols specified in the *Guidance,* section 5.0 "Conducting a Dye Study," as well as other protocols listed in subpart C Protocols.

Validation (and possibly calibration) of a model may be necessary and shall be done in accordance with the *Guidance* mentioned above - in particular subsection 5.2 "Quantify Dilution." The resultant dilution ratios for acute and chronic boundaries shall be applied in accordance with directions found in Ecology's *Permit Writer's Manual* (1994) - in particular Chapter VI.

A Plan of Study shall be submitted to the Department for review 30 days prior to initiation of the effluent mixing study.

B. Reporting Requirements

If the Permittee has information on the background physical conditions or background concentration of chemical substances (for which there are criteria in Chapter 173-201A WAC) in the receiving water, this information shall be submitted to the Department as part of the Effluent Mixing Report.

If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the State Water Quality Standards, Chapter 173-201A WAC, the Department may issue a regulatory order to require a reduction of pollutants or modify this permit to impose effluent limitations to meet the Water Quality Standards.

The Permittee shall use some method of fixing and reporting the location of the outfall and mixing zone boundaries [i.e., triangulation off the shore, microwave navigation

system, or using Loran or Global Positioning System (GPS) coordinates]. The method of fixing station location and the actual station locations shall be identified in the report.

C. Protocols

The Permittee shall determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or by another method approved by the Department:

-Akar, P.J. and G.H. Jirka, *Cormix2: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Multiport Diffuser Discharges,* USEPA Environmental Research Laboratory, Athens, GA, Draft, July 1990.

-Baumgartner, D.J., W.E. Frick, P.J.W. Roberts, and C.A. Bodeen, *Dilution Models for Effluent Discharges,* USEPA, Pacific Ecosystems Branch, Newport, OR, 1993.

-Doneker, R.L. and G.H. Jirka, *Cormix1: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Submerged Single Port Discharges,* USEPA, Environmental Research Laboratory, Athens, GA, EPA/600-3-90/012, 1990.

-Ecology, *Permit Writer's Manual*, Water Quality Program, Department of Ecology, Olympia WA 98504, July, 1994, including most current addenda.

-Ecology, *Guidance for Conducting Mixing Zone Analyses*, Permit Writer's Manual, (Appendix 6.1), Water Quality Program, Department of Ecology, Olympia WA 98504, October 1996.

-Kilpatrick, F.A., and E.D. Cobb, Measurement of Discharge Using Tracers, Chapter A16, *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics,* USGS, U.S. Department of the Interior, Reston, VA 1985.

-Wilson, J.F., E.D. Cobb, and F.A. Kilpatrick, Fluorometric Procedures for Dye Tracing, Chapter A12. *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics,* USGS, U.S. Department of the Interior, Reston, VA 1986.

## S13. OUTFALL INSPECTION

The Permittee shall inspect initially and every two years, the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, it shall be included in the report. This report shall also contain the records of a visual inspection by a diver licensed for such work. The report shall addresses the accumulation of sediment in the vicinity of the outfall, and shall report any blockages, shifting, or damage to the outfall as it was approved for construction. Within 30 days after initial operation of the new outfall and every two years thereafter, the inspection report shall be submitted to the Department.

## GENERAL CONDITIONS

### G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

### G2. PROPER OPERATION AND MAINTENANCE

The Permittees shall at all times properly operate and maintain all facilities and systems of collection, treatment, and control (and related appurtenances) which are installed or used by the Permittees for pollution control.

### G3. REDUCED PRODUCTION FOR COMPLIANCE

The Permittees, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

### G4. NONCOMPLIANCE NOTIFICATION

If for any reason, the Permittees does not comply with, or will be unable to comply with, any of the discharge limitations or other conditions specified in the permit, the Permittees shall, at a minimum, provide the Department with the following information:

A. A description of the nature and cause of noncompliance, including the quantity and quality of any unauthorized waste discharges;

B. The period of noncompliance, including exact dates and times and/or the anticipated time when the Permittees will return to compliance; and

C. The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the noncompliance.

In addition, the Permittees shall take immediate action to stop, contain, and clean up any unauthorized discharges and take all reasonable steps to minimize any adverse impacts to waters of the state and correct the problem. The Permittees shall notify the Department by telephone so that an investigation can be made to evaluate any resulting impacts and the corrective actions taken to determine if additional action should be taken.

In the case of any discharge subject to any applicable toxic pollutant effluent standard under Section 307(a) of the Clean Water Act, or which could constitute a threat to human health, welfare, or the environment, 40 CFR Part 122 requires that the information specified in Sections G4.A., G4.B., and G4.C., above, shall be provided not later than 24 hours from the time the Permittees becomes aware of the circumstances. If this information is provided orally, a written submission covering these points shall be provided within five days of the time the Permittees becomes aware of the

circumstances, unless the Department waives or extends this requirement on a case-by-case basis.

Compliance with these requirements does not relieve the Permittees from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

## G5. BYPASS PROHIBITED

The intentional bypass of wastes from all or any portion of a treatment works is prohibited unless the following four conditions are met:

A. Bypass is: (1) unavoidable to prevent loss of life, personal injury, or severe property damage; or (2) necessary to perform construction or maintenance-related activities essential to meet the requirements of the Clean Water Act and authorized by administrative order;

B. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment down time, or temporary reduction or termination of production;

C. The Permittees submits notice of an unanticipated bypass to the Department in accordance with Condition G4. Where the Permittees knows or should have known in advance of the need for a bypass, this prior notification shall be submitted for approval to the Department, if possible, at least 30 days before the date of bypass (or longer if specified in the special conditions);

D. The bypass is allowed under conditions determined to be necessary by the Department to minimize any adverse effects. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

After consideration of the factors above and the adverse effects of the proposed bypass, the Department will approve or deny the request. Approval of a request to bypass will be by administrative order under RCW 90.48.120.

## G6. RIGHT OF ENTRY

The Permittees shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit;

B. To have access to and copy at reasonable times any records that must be kept under the terms of the permit;

C. To inspect at reasonable times any monitoring equipment or method of monitoring required in the permit;

D. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and

E. To sample at reasonable times any discharge of pollutants.

## G7. PERMIT MODIFICATIONS

The Permittees shall submit a new application or supplement to the previous application where facility expansions, production increases, or process modifications will (1) result in new or substantially increased discharges of pollutants or a change in the nature of the discharge of pollutants, or (2) violate the terms and conditions of this permit.

## G8. PERMIT MODIFIED OR REVOKED

After notice and opportunity for public hearing, this permit may be modified, terminated, or revoked during its term for cause including, but not limited to, the following:

A. Violation of any terms or conditions of the permit;

B. Failure of the Permittees to disclose fully all relevant facts or misrepresentations of any relevant facts by the Permittees during the permit issuance process;

C. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit;

D. Information indicating that the permitted discharge poses a threat to human health or welfare;

E. A change in ownership or control of the source; or

F. Other causes listed in 40 CFR 122.62 and 122.64.

Permit modification, revocation and reissuance, or termination may be initiated by the Department or requested by any interested person.

## G9. REPORTING A CAUSE FOR MODIFICATION

A Permittees who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for modification or revocation and reissuance under Condition G8. or 40 CFR 122.62 must report such plans, or such information, to the Department so that a decision can be made on whether action to modify or revoke and reissue a permit will be required. The Department may then require submission of a new application. Submission of such application does not relieve the Permittees of the duty to comply with the existing permit until it is modified or reissued.

## G10. TOXIC POLLUTANTS

If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the Department shall institute proceedings to modify or revoke and reissue the permit to conform to the new toxic effluent standard or prohibition.

## G11. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, detailed plans shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Facilities shall be constructed and operated in accordance with the approved plan.

## G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

## G13. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the permit shall be construed as excusing the Permittees from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

## G14. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

## G15. REVOCATION FOR NONPAYMENT OF FEES

The Department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

## G16. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

## G17. DUTY TO REAPPLY

The Permittees must reapply, for permit renewal, at least 180 days prior to the specified expiration date of this permit.